

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Linda I. Hoffberg-Borghesani, et al.  
Filed : February 2, 2000  
Serial No. : 09/497,071  
For: : ADAPTIVE PATTERN RECOGNITION BASED CONTROL  
SYSTEM  
AND METHOD  
Group Art Unit: 2623  
Examiner : Salce, Jason P.

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March 30, 2009

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

REPLY BRIEF PURSUANT TO 37 § C.F.R. 41.41

Pursuant to 37 C.F.R. § 41.41, applicants herewith submit their Reply Brief.

Applicants respectfully request Oral Argument of the appeal.

## ARGUMENT

The arguments herein are supplemental to those set forth in Applicant's Appeal Brief, and except as explicitly noted or inconsistent, none of which are waived or withdrawn.

## FORMAL REJECTIONS

**i. Claim 177 is rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite.**

Consistent with best practices of English language usage, in accordance with the Examiner's proposed interpretation of the claim language, not one, but two commas must be inserted, one after "characteristics" to separate the first and second clauses, and one after "programs" to separate the second and third clauses. On the other hand, the absence of such a second comma implies that the proposed separation of clauses is incorrect.

A further deficiency of the Examiner's interpretation is that the claim requires "determining a degree of correspondence between ..." It is not clear how one would determine "a degree of correspondence" between three separate elements, and then perform an "outputting an identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media in dependence on the automatically determined correspondence". While theoretically, mutual correspondences between the three factors might be determined, the application of these three independent correspondences to the outputting is untenable. The result of the Examiner's interpretation is a needless complication of the claim interpretation which, as Admitted by the Examiner, is not

supported by the specification, and indeed, the Examiner has described how such a 3-way correspondence would actually be determined.

The Examiner states, “Therefore, when an automatic determination of a degree of correspondence is performed, data including content characteristics, a member of the set of available media programs and the data representing content characteristics of previously selected media are considered.” In fact, the word “considered” is not part of the claim, and adding such a word to the claim or implying it in interpreting the claim is error; the claim requires that a degree of correspondence be automatically determined.

Therefore, the Examiner’s interpretation is clearly unreasonable, inconsistent with the application and other claims, and only a result of an unfair analysis. In contrast, Applicant’s proposed interpretation, on the other hand, is consistent with law, the specification and the other claims, reasonable, and fair.

The Examiner states that the insertion of a comma is supported by Vogel, an applied prior art reference. However, the interpretation of the claims is not supposed to be based on a reference to be applied in rejecting them, but rather on applicant’s own disclosure, or the broadest reasonable interpretation of the claims, which does not support this interpretation.

**ii. Claims 166-168, 177, 187, and 190-193 are rejected under 35 U.S.C. § 112, as allegedly failing to comply with the written description requirement.**

The Examiner does not acknowledge that the specification states that the various elements disclosed in the specification can be combined in various combinations.

Therefore, a series of formal rejections under 35 U.S.C. § 112 are asserted, in which the

Examiner maintains that the various aspects of each claim are lacking supporting disclosure that they may be combined as set forth in the claims.

The Examiner's position seems to be that a concise and consolidated disclosure within a small portion of the large specification is required, and essentially that it would be impermissible to provide detailed disclosure of "tools" in separate sections of the specification and exemplified in one or more embodiments, with separate teachings as to how these "tools" may be used together to achieve a useful result. This is legal error. Applicant's disclosure clearly indicates that combinations and subcombinations of the various technologies and embodiments are contemplated, and through the detailed disclosure make more than clear that the claimed invention was described in writing, in its entirety by applicants.

In fact, the Specification, page 66, lines 31-37, states:

The above-mentioned references are exemplary, and are not meant to be limiting in respect to the resources and/or technologies available to those skilled in the art. Of course it should be realized that the hardware for implementing a system may be integrally related to the choice of specific method or software algorithm for implementing the system, and therefore these together form a system. **It is noted that in view of the present disclosure, it is within the skill of the artisan to combine in various fashions the available methods and apparatus to achieve the advanced interface and control system of the present invention.**

The specification, page 3, lines 9-24, also states, more generally:

Therefore, the present invention builds upon the prior art, which defines various problems to be addressed, intelligent systems and methods, tuning paradigms and user interfaces. Therefore, as set forth below, and in the attached appendix of references and abstracts, incorporated herein by reference, a significant number of references detail fundamental technologies which may be improved according to the present invention, or incorporated together to form a part of the present invention. Thus, the complete disclosure of these references, combined with the disclosure herein, and/or with each other, are a part of the present invention. The disclosure herein is not meant to be limiting as to the knowledge of a person of ordinary skill in the art. Thus, prior art cited herein is

intended to (1) disclose information related to the application published before the filing or effective filing date hereof; (2) define the problem in the art to which the present invention is directed, (3) define prior art methods of solving various problems also addressed by the present invention; (4) define the state of the art with respect to methods disclosed or referenced herein; (5) detail technologies used to implement methods or apparatus in accordance with the present invention; and/or (6) define elements of the invention as disclosed in individual references, combinations of references, and/or combinations of disclosure of the references with the express disclosure herein.

In addition, it is respectfully submitted that the application must be considered as a whole for support of the claims, and it is the Examiner's burden to demonstrate lack of compliance with the law. The Examiner's piecemeal and limited analysis of the specification is in error. A presumption is generally applied that discussion in the specification about various aspects describe elements of a single body of concepts, unless they are inconsistent, or such general combinations are disclaimed. The present application is entitled to such a presumption. A contrary holding would lead to a needless proliferation of disclosed combinations and subcombinations which would complicate the tasks of the U.S. Patent Office and the Board, without demonstrably improving the quality of disclosure or its respective teachings to the public. It is further noted that a legal holding that each proposed combination must be specifically disclosed in the form as presented in the claims that the prior art would presumably have to meet the same requirements for applicability. Rather, the applicable standard is whether a person of ordinary skill would believe that applicant was in possession of the claimed subject matter at the time of the application, and it is respectfully submitted that this is the case.

The recent ICU Medical, Inc. v. Alaris Medical Systems, Inc. (Fed. Cir. Case 2008-1077, 2009) states:

To satisfy the written description requirement, a patent applicant must “convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the ‘written description’ inquiry, whatever is now claimed.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991). Such description need not recite the claimed invention in haec verba but must do more than merely disclose that which would render the claimed invention obvious. *Univ. of Rochester*, 358 F.3d at 923; *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1566–67 (Fed. Cir. 1997); see also *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306–07 (Fed. Cir. 2008) (explaining that § 112, ¶ 1 “requires that the written description actually or inherently disclose the claim element”).

It is respectfully submitted that applicant meets these requirements.

It is particularly noted that the “summary of the invention” referencing the specification required by 37 C.F.R. § 41.37(a)(2)(v) do not serve to limit the support for the claims presented in the specification. A complete and voluminous application was filed in compliance with 35 U.S.C. § 112, and applicant is entitled to the benefit of its entirety, not merely small portions thereof, in meeting their disclosure requirements, including enablement and written description.

The Examiner further notes that “multiple locations of the specification containing different embodiments/inventions are referenced in order to support the claim limitations and that no evidence has been provided (nor stated in Applicant's specification) that the different embodiments/inventions can be integrated together to result at the claimed invention.” This is clearly not the case, and the specification provides discussion numerous embodiments and broad discussion of the various concepts, with substantive teachings that the various embodiments may be used together and in conjunction. For example, the specification discusses

## ART REJECTIONS

In formulating the art rejections, the Examiner this parses the claims into clauses, seeks to map each clause to a particular portion of the reference, and concludes that the invention is anticipated or rendered obvious, without ensuring that the elements are consistently applied through the respective analysis, or that the proposed structures adopted from the reference are adequately enabled in the environment of Applicants' claims. This strategy appears pervasive in the Answer, and is respectfully traversed by Applicant.

## CLAIM 155

Claim 155 provides at least "... automatically performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media, wherein said data representing content characteristics are not received as an input from a human user...". The examiner misinterprets this to be limited to refer only to an input from a single viewer. Rather, claim 155 provides that the content characteristics are not received as an input from any "human user", and is not limited to a single viewer. Thus, the claim language is not met by Vogel, wherein an editor presumably provides input of the EPG entries and/or censorship categories.

This same analysis and distinction applies to independent claims 162 and 168.

The Examiner also interprets the claim language, "automatically issuing a notification of available media having characteristics corresponding to, but not identical to previously selected media," to also permit the issuance of a notification of available media having characteristics identical to previously selected media. Such an

interpretation renders the claim language a meaningless distinction, and clearly abrogates its plain meaning. The claim language provides that the notification is “of available media having characteristics corresponding to, but not identical to previously selected media”, and therefore its further inclusion of identical available media renders Vogel outside the scope of the claim, and non-anticipatory. Note that Vogel does not analyze the actual content of the media, and therefore do not provide any enabling disclosure of how such a distinction would be made.

The Examiner states that the program schedule data is received after a program selection by a user, and thus literally meets the claim language of “storing data describing available media and storing data representing previously selected media”. However, given this same interpretation, Vogel does not meet the subsequent use of that data, “automatically performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media”.

The Examiner argues that a manual search by a user through an automatically generated list presented on a screen is an “automatically” performed search. Applicant begs to differ; since the search itself remains manual, as no part of the automated system “searches” as required by the claims. See, Vogel, Col. 5, lines 13-20, cited by Examiner for the proposition that Vogel automatically performs a search. As previously stated, the “real time” information displayed according to Vogel, see Col. 3, lines 59-66, does not represent content characteristics of the previously selected media, and therefore the Examiner’s analysis fails on both bases.



#### CLAIM 156

With respect to claim 156, the Examiner makes clear his interpretation of identifying information for television programs (shown in Fig. 4) as being content characteristics, which is believed erroneous per se, and also ignores that claim 155 requires that “said data representing content characteristics are not received as an input from a human user”. Note that there is no enabling disclosure in Vogel, for a non-human input listing of program identifying information of the type provided. Therefore, the Examiner’s rejection of claim 156 should be reversed.

#### CLAIM 160

With respect to claim 160, the Examiner erroneously interprets the censorship rating or program title as “theme information”. While a program creator can entitle a program with its theme, there is no necessary relationship between title and theme, rendering this proposed correlation unreliable and arbitrary. In order to anticipate, the prior art must necessarily meet the metes and bounds of the claim, and not incidentally or unpredictably fall within the claim scope. *Tilghman v. Proctor*, 102 U.S. 707, 26 L.Ed. 279 (1880). See, *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 261 U.S. 45 (1923).

#### CLAIMS 162 and 164

Claim 162 provides “... a processor component configured to automatically determine a correspondence between data representing content characteristics of media within a set of available media programs with data representing content characteristics of

previously delivered media, wherein said data representing content characteristics are not received as input from a human user, and producing a signal dependent on a degree of said correspondence.” There is no basis to interpret Vogel as retaining data representing content characteristics of previously delivered media, which would be required for its subsequent use.

The examiner misinterprets the “correspondence” as encompassing a correspondence between an apparently filtered program identifying and censorship information guide, which as previously discussed are not “content characteristics”, and “data representing content characteristics of previously delivered media”, which the Examiner does not explicitly analogize with any structures of Vogel, referencing Fig. 3 and Col. 5, lines 13-20, which have nothing to do with “data representing content characteristics of previously delivered media”.

Note also that, per claim 162, “said data representing content characteristics are not received as input from a human user”, whereas in Vogel, the program data is presumably input by a human.

The Examiner explains his rejection, stating: “The examiner disagrees and notes that Vogel's classification characteristic clearly represents a degree of correspondence (see the third definition provided by applicant, where the Adult "A" classification clearly represents the seriousness of adult content in a movie).” Applicants respectfully traverse this analysis, since, while the limited number of classifications themselves may be arbitrarily selected by the human editor, and thus perhaps might represent the “seriousness of adult content in a movie”, this is quite irrelevant to the claim, which provides “a processor component configured to automatically determine a

correspondence between data representing content characteristics of media within a set of available media programs with data representing content characteristics of previously delivered media, ... and producing a signal dependent on a degree of said correspondence”. Thus, the rejection must fail, since the Examiner has failed to even allege a *prima facie* case of anticipation with respect to a signal dependent on a degree of correspondence.

Therefore, even adopting the Examiner’s interpretation of Vogel, the reference still fails to teach or suggest that a processor component which automatically determines a **correspondence** between “data representing content characteristics of media within a set of available media programs” with “data representing content characteristics of previously delivered media.” Vogel also fails to teach or suggest “producing a signal dependent on a degree of said correspondence”, and at best applies a filter without any consideration of a “degree of said correspondence”.

These same distinctions apply to claim 164.

#### CLAIM 165

With respect to claim 165, the Examiner interprets an adaptive algorithm as encompassing a program classification and censorship system as disclosed in Vogel, Col. 4, lines 40-67 and/or Col. 6, lines 22-66. It is respectfully submitted that this does not qualify under any reasonable interpretation of a system according to claim 165, “wherein interaction with said system through a user interface serves as an input to an adaptive algorithm of said processor component for determining said correspondence.” An

adaptive algorithm is one which produces different results at different times for the same or corresponding data, based on an adaptation. Vogel discloses no such algorithm.

#### CLAIM 168

Claim 168 provides “a processor for automatically searching media items available for selection and for presenting a recommendation of at least one available media item, based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user”. Neither Vogel, nor Wachob present any recommendation of at least one available media item to a user “based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user”. As stated above, claim 168 is also distinguished based on the fact that the program information according to Vogel is provided by a human user, and thus falls outside the scope of the claim, which requires “content characteristics of available media items input independently of a human user”.

It is further respectfully submitted that the combination of Vogel and Wachob is not enabled to achieve the present claims, and there is insufficient motivation to combine and modify the references as required to meet the claims.

The Examiner indicates that applicant has not properly defined the word “recommendation”, and suggested reference to the specification. The specification states:

U.S. 5,459,306, incorporated herein by reference, relates to a method for delivering targeting information to a prospective individual user. Personal user information is gathered, as well as information on a user's use of a product, correlated and stored. Classes of information potentially relevant to future purchases are then identified, and promotions and recommendations delivered based on the information and the user information. (Page 52, lines 14-18)

In the case of encrypted program source material, it is particularly advantageous if the characterization of the program occurs without charging the account of the user for such characterization, and only charging the account if the program is viewed by the user. The user may make a viewing decision based on the recommendation of the interface system, or may review the decision based on the title or description of the program, or after a limited duration of viewing. Security of the system could then be ensured by a two level encryption system, wherein the initial decryption allows for significant processing, but not comfortable viewing, while the second level of decryption allows viewing, and is linked to the accounting system. Alternatively, the decryption may be performed so that certain information, less than the entirety, is available in a first decryption mode, while other information comprising the broadcast information is available in a second decryption mode. (Page 139, lines 17-27)

A review of US 5,459,306 provides further context for the analysis of this term.

However, it is respectfully submitted that where the specification does not mandate an alternate use, a word used in the claim is entitled to its normal meaning within the context of the specification. The Examiner has provided no substantive rebuttal demonstrating error in applicants' interpretation.

#### CLAIM 169

Claim 169 provides that "said media items comprise television programs and said stored characteristics comprise a channel guide list, and television program-descriptive text accompanies said channel guide list." Vogel does not teach or suggest any such "television program-descriptive text".

#### CLAIM 175

With respect to claim 175, the Examiner interprets the adverb "automatically" to be divorced from the verb it modifies, "generating". In fact, the claim does not read,

“generating, in conjunction with an automated system, ...” and should not be so interpreted. The Examiner states:

Referring to claim 175, Applicant argues that Vogel does not teach automatically generating data representing characteristics of media. As cited by the examiner, data transmitted from a cable headend generates the data to be transmitted to the system of Vogel (see again Column 3, Lines 37-45 and 59-66). Further note that the claims are broad and generation could be from the point Vogel, extracts and decodes the EPG information from the television signal, stores the information in RAM or when the data is retrieved from RAM and displayed to the user. Again, the Applicant presents multiple definitions from the Internet, however the Applicant has not argued the term "generating" in view of Applicant's own specification.

This argument is specious. The claim requires “the step of automatically generating data representing characteristics of media.” Vogel does not “automatically generat[e] data representing characteristics of media” by any reasonable interpretation, and other types or scopes of automation are simply not relevant to this claim. Applicants need not “argue” about the meaning of the term; claim construction is a matter of law under *Markman v. Westview Instruments*, 517 U.S. 370 (1996), and the Board has an obligation to properly construe the claim language. In this case, the word “generate” is clearly distinct from “provide”, and the claim should not be interpreted as if it said “the step of automatically *providing* data representing characteristics of media.”

#### CLAIM 176

With respect to claim 176, the Examiner rejects the claim, stating “Referring to claim 176, Applicant argues that Vogel does not teach that the data representing characteristics comprises a description of media content. The examiner disagrees and notes that the classification field clearly indicates description of the media content, because a classification can be used to describe whether or not a program is suitable for

viewing by a child (see Column 3, Lines 54-55).” It is respectfully submitted that the suitability of a program is not a description of the media content, and such suitability is apparently based on a censorship code which can be applied based on any one of a number of factors, and indeed may be arbitrary or incorrect.

The Examiner notes in his rejection that “the classification field clearly indicates description of the media content, because a classification can be used to describe whether or not a program is suitable for viewing by a child (see Column 3, Lines 54-55).” It is respectfully submitted that the apparent use of a classification does not transform the classification into a description.

#### CLAIM 177

The Examiner applies an art rejection to claim 177 that is apparently on the same basis as claims 155, 162, and 168. This rejection is logically unsound; the Examiner has intentionally interpreted claim 177 as being distinct from the other independent claims, and has refused entry of an amendment which would literally conform claim 177 to that scope, as raising new issues of patentability. Therefore, the same rejection cannot be logically applied while maintaining that the scope is different. While Applicant has alleged that the specification should not be interpreted to encompass a 3-way “degree of correspondence”, this is, in fact, a matter for the discretion of the Board, and should not be pre-decided before due consideration.

The Examiner alleges that “Vogel clearly teaches a characteristic being a title, channel or time (see Examiner's rebuttal of claims 155-156, 161 and 174 above), which clearly is a characteristic of a television program content.” As was previously indicated,

the title is perhaps a characteristic of a program, but is not a “content characteristic” of a media program as required by the claim.

#### CLAIM 179

Claim 179 provides a method which at least “automatically determine[es] a degree of correspondence of prior selections by the respective user and members of the set of available media programs based on at least the content parameters relating to prior selections by the respective user and the associated content parameters of members of the set of available media programs....” It is respectfully submitted that Vogel does not automatically determine a degree of correspondence, and yields only a binary decision of classification. As discussed above, it is respectfully submitted that the parameters of Vogel as applied by the examiner are not “content parameters”.

The Examiner notes that “the terms content characteristics and content parameters do not distinguish over the Vogel prior art of record. Vogel teaches a title of a program (see Figures 3-4), where clearly, a title is a characteristic of content (the program). Further note that the time, channel and classification characteristics also represent content characteristics and content parameters (as described in the rejection of claim 179).”

The Examiner misapplies “content” to refer to any media, that is, the container, as opposed to the information within the container. This is improper, especially as the claim is formulated, and the word “content” should properly be applied to the information within a media program.



#### CLAIM 182

Claim 182 provides a method comprising at least “automatically determining a degree of correspondence between content-dependent characteristics of available media and content-dependent characteristics of media previously selected by the respective user...” Vogel does not teach or suggest “automatically determining a degree of correspondence”, and at best teaches binary decisions.

#### CLAIM 183

Claim 183 provides a method comprising at least “receiving data describing a plurality of content characteristics of available media.” Vogel does not disclose “content characteristics”, but rather at best identifications and/or classifications. Note that “content” is the information contained in a media program, and not the media program regardless of its information.

#### CLAIM 187

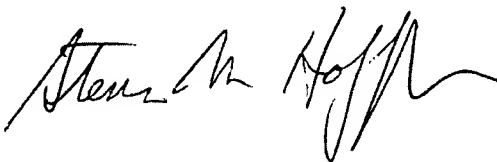
With respect to claim 187, Applicants have provided information intended to assist in claim interpretation, such as Wikipedia entries. Wikipedia is not definitive as to the interpretation of the claims at the time of the invention, and the absence of errors or bias is not warranted by Applicants. (Applicants, however, had no part in the creation of the Wikipedia entry.) Wikipedia is, however, informative, and its teachings may be otherwise verified as may be deemed necessary. It is not clear that the U.S. Patent Office has “recognized sources of information” and unrecognized sources of information, however, the burden remains on the Examiner to establish a *prima facie* rejection, and it

is respectfully submitted that the Examiner has provided no factual analysis to assist the Board in concluding that Vogel discloses a hypertext system. The Examiner states that "Hypertext is defined as, *"text on a computer that at will lead the user to other, related information on demand."* Again, Vogel at Column 5, Lines 51 -59 teaches that each of the program listings having an option to select the "?" key which allows the program listings to become a hypertext entry that references an additional page of information about the television program/movie." Applicant respectfully submits that this is an inadequate and incorrect definition of "hypertext", and has no factual basis. It is the Examiner's burden to identify an authoritative definition of "hypertext", especially if he declines to accept Applicants' proposal, and substituting mere argument for evidence is unacceptable.

#### CONCLUSION

It is therefore respectfully submitted that the claims are patentable, and a favorable decision on the merits is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven M. Hoffberg", with a stylized, flowing script.

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